

"LADDERMATE" Ladder Stabilizing Straps

Description And Use

1. GENERAL

- 1.01 This section covers the description and use of the LADDERMATE (#LM100) and the TOP-LADDERMATE (#LM200). Parts of this section are reproduced with permission of *Dicke Tool Company*.
- 1.02 This practice eliminates section DKTL 081-740-800SW. Whenever this practice is reissued, the reason(s) for reissues will be listed in this paragraph.
- 1.03 The graphics for this practice have been placed at the rear of the section to facilitate mechanization of this practice into TDIS.
- 1.04 The use of the LADDERMATE straps is *not* a requirement. It is intended as an alternative to the standard rope lashing method.
- 1.05 If equipment design and/or manufacturing problems should occur, refer to Section SW 010-522-906 for procedures on filing an Engineering complaint.

2. DESCRIPTION

- 2.01 The LADDERMATEs are stabilizing straps used to secure an extension ladder to a utility pole or suspension strand. It is not intended, nor should it be used, for any other purpose.
- 2.02 The BOTTOM-LADDERMATE (Fig. 1) is comprised of *three* sections, the Main Strap, and two End Straps. The Main Strap is constructed of a bright, safety yellow, fabric webbing 1-1/2 inches wide by 14 feet long. It has a tag indicating the date of manufacture and an area for writing in the date when the strap was placed into service. The two End Straps are constructed of the same material, and each has a "slide bar" fastener and a spring-loaded snap hook. The TOP-LADDERMATE is similar in design, but made of a red nylon fabric.
- 2.03 LADDERMATEs manufactured after October 1986 are equipped with "D-Rings" attached to the main strap to prevent the disassembly of the three parts. These D-Rings are not to be used for any other purpose.

3. ACCESSORIES

- 3.01 There are *two* accessories available for use with the LADDERMATE. One is the TOP-LADDERMATE (Fig. 2), which is used to secure the top of a ladder.

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- 3.02 The second accessory is a bright yellow carrying/storage bag. It is of mesh type construction to allow free air movement throughout. This aids in drying the straps should they become wet or damp. LADDERMATEs should only be stored in this bag, and hung in the vehicle in such a way as to allow free air movement through the bag. It should not be placed in a toolbox, or placed on the floor of the vehicle.

4. INSPECTION

- 4.01 Inspection of either LADDERMATE must be performed 1) when received new from supplier, 2) before placed in service and 3) prior to each use. The entire strap assembly must be inspected whenever there is suspicion of physical damage (*cuts, abrasion, excessive strain, contact with acids, solvents, and other chemicals*).
- 4.02 Inspect the strap assemblies in the same way as a Body Belt and Safety Strap, section 081-720-101SW. The webbing material of the BOTTOM-LADDERMATE contains a RED wear indicator inside. Should any red be seen, the strap assembly should not be used, and another strap should be issued as replacement. The TOP-LADDERMATE contains no wear indicator, but should be similarly inspected for signs of wear and tear or other visual defects.
- 4.03 The main strap must be inspected along its entire length, on both sides. *Special attention* should be given to the area near the pole contact surface and near the area of the slidebar fasteners.
- 4.04 The end straps should be inspected along the entire length, on both sides. Pay added attention to the area near the hardware, and the area of ladder side rail contact.
- 4.05 If inspection locates any defect(s), the LADDERMATEs *must not be used*, and must be replaced immediately.

5. MAINTENANCE

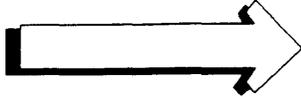
- 5.01 The LADDERMATEs *do not* require periodic maintenance, nor can any be performed.
- 5.02 Dirt and creosote have not shown to be detrimental to the fabric used in the LADDERMATEs. If the LADDERMATE becomes soiled and the user wishes to clean the strap, wash with mild soap and water and allow it to dry.

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6. SAFETY PRECAUTIONS

- 6.01 Safe and proper placement of the ladder is mandatory. Refer to Section 081-740-105SW, Extension Ladders and Attachments, for handling and setting up the ladder.

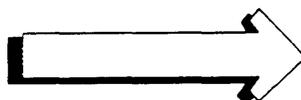


NOTE: The LADDERMATEs are not intended to compensate for poor or uneven footing or improper ladder angle.

- 6.02 The ladder must be placed in a manner to prevent injury to the employee or public, and prevent damage to property. Once the proper placement of the ladder is accomplished, the LADDERMATE(s) may be applied.

7. USING BOTTOM LADDERMATE

- 7.01 Raise the upper section of the extension ladder to the desired height and place it against the pole. Make any necessary adjustments in direction and establish the correct angle and footing.
- 7.02 Place the ladder so that the distance measured from the base to a line extended vertically from the top point of contact is approximately 1/4 the length of the ladder. (Fig. 3)
- 7.03 The "*firemen's method*" is a convenient way of checking the angle of the ladder. Place your toes against the base of the ladder, fully extend both arms toward the side rails, parallel to the ground. When standing erect, you should be able to grasp the side rails.
- 7.04 Using the BOTTOM-LADDERMATE, secure the ladder to the base of the pole or stationary object. (Follow the four steps in Fig. 4.)
- 7.05 After the base of the ladder is secured, wearing the required safety gear, ascend the ladder to the fourth rung and *verify* that the BOTTOM-LADDERMATE strap has sufficient tension. This can be accomplished by placing a slight twisting motion to the side rails. There should be less than 3" of movement on either side rail. If there is more than 3" of movement, descend the ladder and increase the tension of the LADDERMATE equally on both sides. *RE-TEST USING THE SAME PROCEDURE.*



**NOTE: DO NOT OVER-TIGHTEN THE LADDERMATE!
EXCESSIVE TENSION MAY CAUSE PREMATURE LADDER
FAILURE!**

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- 7.06 The top of the ladder must be secured by using a 3/8 inch handline *or* by using the TOP-LADDERMATE.

8. USING TOP LADDERMATE

8.01 Securing The Ladder To A Pole (Fig. 5)

- o After following all proper safety procedures for placing the ladder against the pole, carefully ascend and secure yourself with the body belt.
- o Start with cam-buckle side. Run out strap all the way to allow use of full length of strap. Attach loop adjacent to cam-buckle to ladder rail below first rung.
- o Attach the TOP-LADDERMATE to the left side rail (right side if left-handed) below the top rung in the same manner as the BOTTOM-LADDERMATE.
- o Wrap the LADDERMATE away from you, and then to the opposite side rail below the top rung. Reaching behind the pole, grasp the end of the LADDERMATE strap which is on the opposite side and pull snugly.

8.02 Securing The Ladder to Suspension Strand - Hooks *Above* Strand (Fig. 6)

- o After following all proper safety procedures for placing the ladder against the strand, carefully ascend and secure yourself with the body belt.
- o Start with cam-buckle side. Run out strap all the way to allow use of full length of strap. Attach loop adjacent to cam-buckle to ladder rail below third rung.
- o Feed entire strap up and around second rung and strand three full wraps, keeping snug as possible.
- o Attach opposite loop to ladder rail (opposite) below third rung.
- o Tighten strap by alternately pulling on free end (pull away from your body and the ladder) and working slack toward cam-buckle.

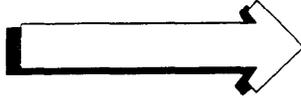
8.03 Securing The Ladder To Suspension Strand - With Hooks *On* Strand (Fig. 7)

- o After following all proper safety procedures for placing the ladder against the strand, carefully ascend and secure yourself with the body belt.
- o Start with cam-buckle side. Run out strap all the way to allow use of full length of strap. Attach loop adjacent to cam-buckle to ladder rail below second rung.

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- o Feed entire strap up and around strand two full wraps, directly next to hook.
- o Cross strap over front (top) of hooks and make two full wraps around the strand directly next to and outside the opposite hook.
- o Attach remaining loop to ladder rail below first rung.
- o Tighten strap by alternately pulling on free end (pull away from your body and the ladder) and working slack toward cam-buckle.



NOTE: Do not move base of ladder after the upper end has been secured to the strand.

8.04 Ladder Removal

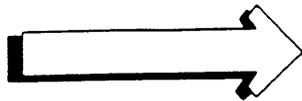
- o To remove the ladder from the pole, the lashing TOP-LADDERMATE must first be removed. This must be done while you are secured to the pole or strand with a body belt. The TOP-LADDERMATE is removed by obtaining slack via the special release mechanism. This is the piece of hardware the strap slides through to tighten it originally. This mechanism should be rocked in a direction away from the pole to obtain slack. When sufficient slack is obtained, the snaps on each end may be released to remove the strap.
- o After this is accomplished, descend the ladder. From a standing position at the base of the ladder, lift the side rails slightly, and move the ladder base approximately 8 inches towards the pole (Fig. 8). This will place slack in the BOTTOM-LADDERMATE which will allow you to release the snaps and remove the strap.
- o After the LADDERMATEs are removed, place them in the LADDERMATE BAG. The LADDERMATEs should only be stored in this bag and hung in the vehicle in such a way as to allow free air movement through the bag.

9. REPLACEMENT

- 9.01 When it is determined that a LADDERMATE is defective, the LADDERMATE must be replaced.
- 9.02 When a LADDERMATE shows any defect, the strap must not be used. The supervisor must issue a replacement. Any defect found on the strap must be marked with red 'magic marker' to aid in the inspection process, and to prevent accidental reissue.

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NOTE: An ENTIRE LADDERMATE ASSEMBLY must be replaced as a unit, even if only one part is worn or found to be defective. The only exception to this rule is repair or replacements made by the manufacturer due to product recall or modification.

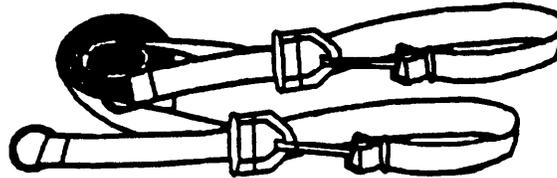


Fig. 1 - Bottom Laddermate - LM100

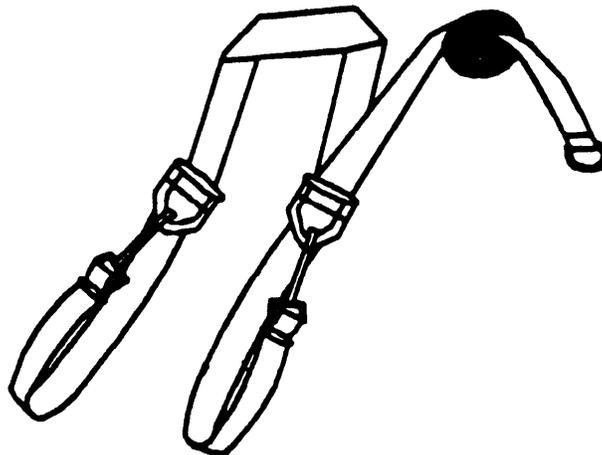


Fig. 2 - Top Laddermate - LM200

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Securing The Ladder To A Pole

(Fireman's Method)

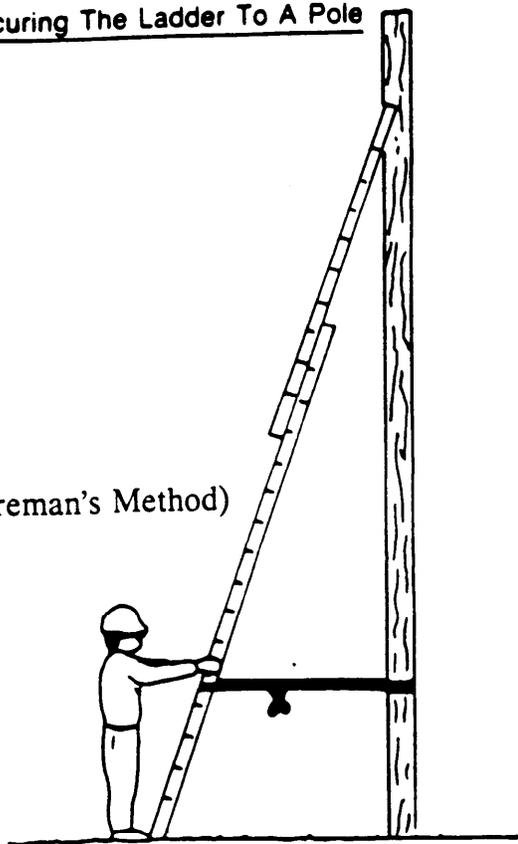
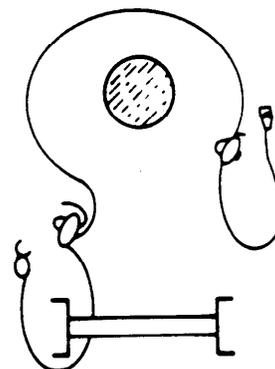


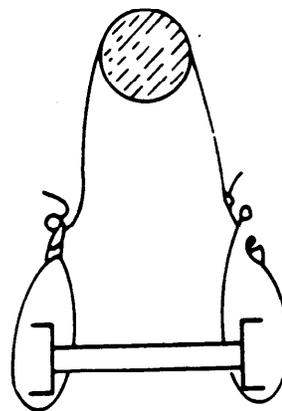
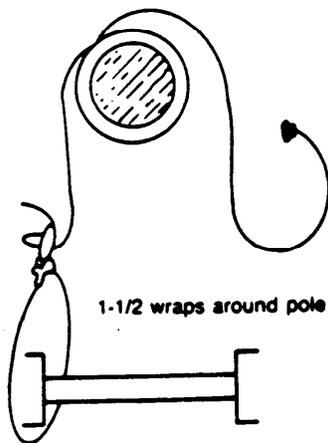
Fig. 3 - Proper Ladder Placement

Fig. 4 - Placing the Bottom-Laddermate

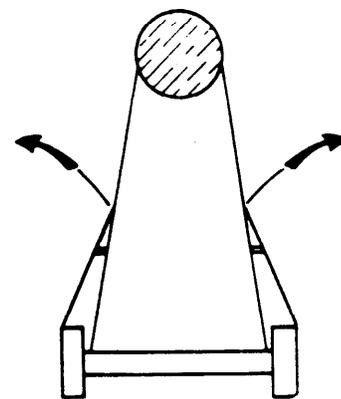
STEP #1 — With the ladder properly extended and positioned at the proper angle to the pole, attach one loop of the strap (snaps facing out) to the left ladder rail directly beneath the 5th rung from the ground.



Step 1
Place strap just below 5th rung.



Step 3



Step 4

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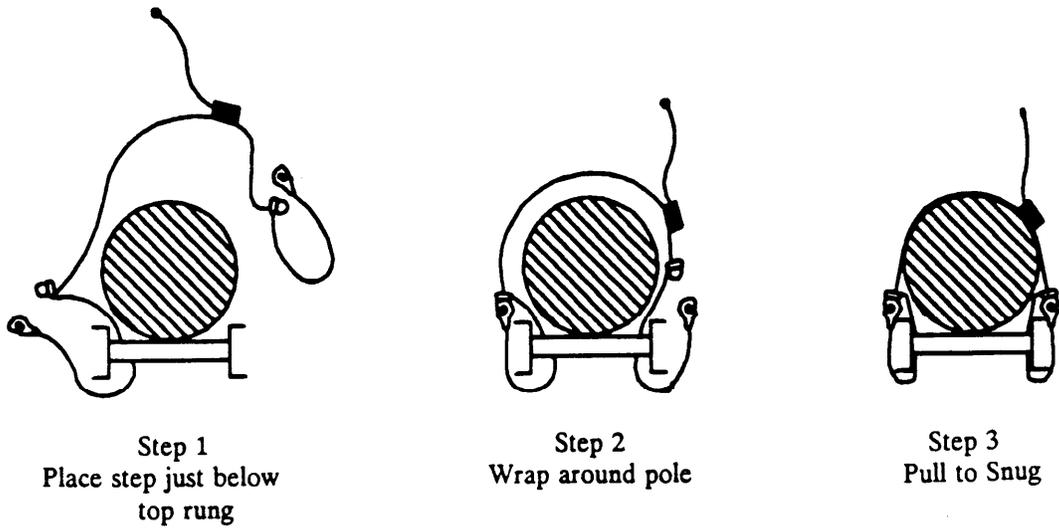


Fig. 5 - Placing the Top-Laddermate on a Pole (Top View)

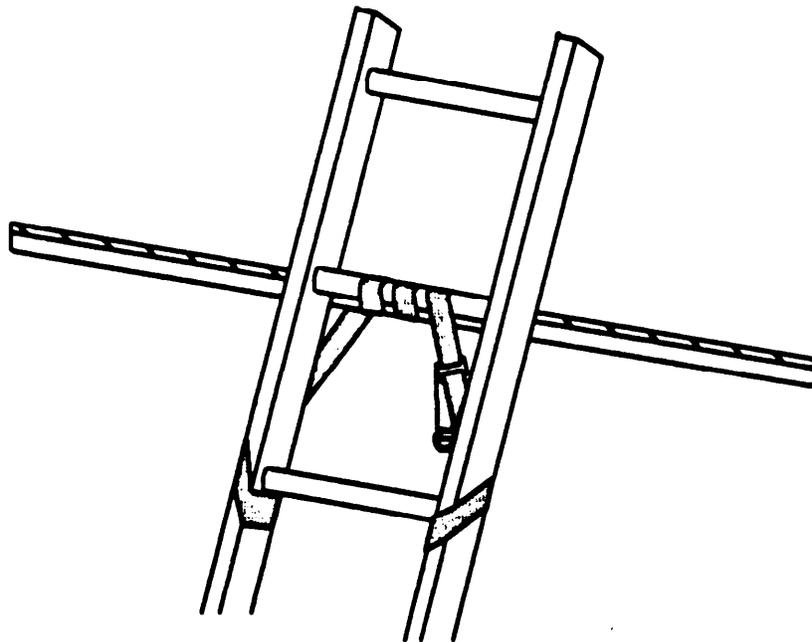


Fig. 6 - Placing the Top-Laddermate on Ladder With Hooks Above Strand

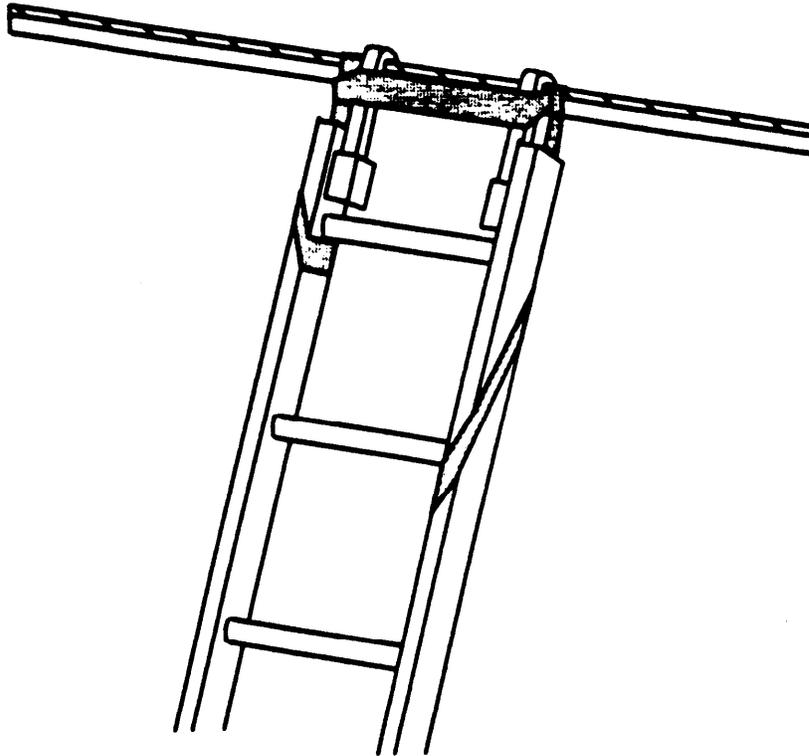


Fig. 7 - Placing the Top-Laddermate on Ladder With Hooks ON Strand

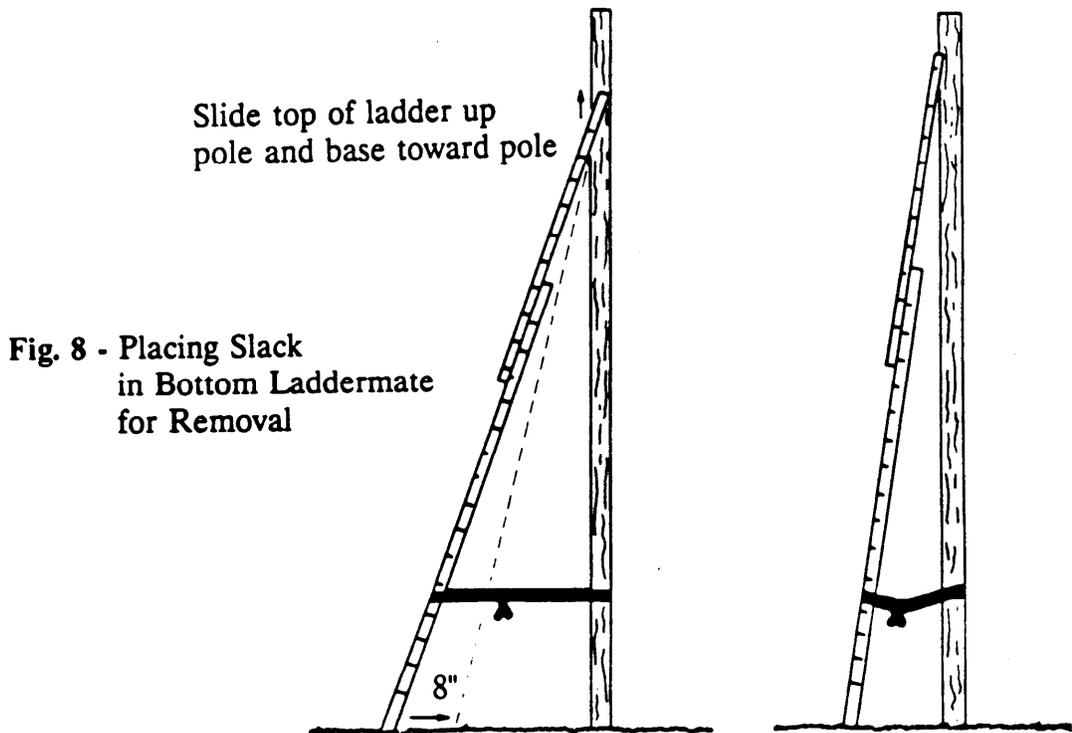


Fig. 8 - Placing Slack in Bottom Laddermate for Removal

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